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IMAGES IN CARDIOLOGY

Delayed Contrast-Enhanced Magnetic Resonance Imaging in the Evaluation of Takayasu Arteritis

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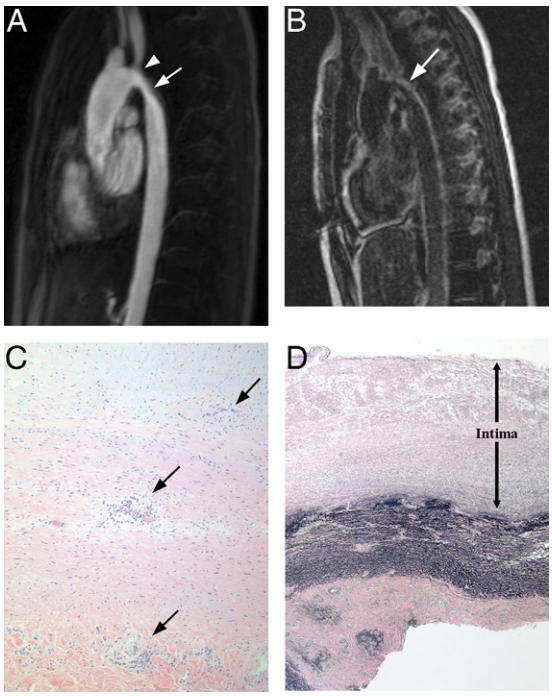

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A 12-year-old Hispanic girl was referred for evaluation of hypertension and a heart murmur. Transthoracic echocardiogram revealed long-segment coarctation of the aorta. **(A)** Gadolinium-enhanced magnetic resonance angiography confirmed long-segment narrowing of the aortic arch isthmus **(arrow)** and mild narrowing in the base of the left subclavian artery **(arrowhead)**. **(B)** Delayed contrast enhancement revealed diffuse enhancement of the aortic wall **(arrow)**. Findings were suspicious for arteritis; however, inflammatory markers were normal. The patient underwent surgical repair of the long-segment aortic coarctation and left subclavian artery stenosis with placement of an interposition Dacron tube graft. Surgical histology of the resected aortic wall revealed panarteritis with **(C)** lymphocytic and plasma cell infiltration **(arrows)** and **(D)** marked intimal hyperplasia **(arrow)** consistent with active Takayasu arteritis. Delayed contrast enhancement of the vessel wall may correlate with the severity of clinical symptoms in patients with known Takayasu arteritis (1). However, this case correlates findings of delayed contrast enhancement of the aortic wall with direct histologic evidence of inflammation in a patient with active Takayasu arteritis but normal inflammatory markers.

REFERENCE

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